

ABSTRACT OF THE DISCLOSURE

A first room-temperature space is formed penetrating through a cryostat along a center axis of a split-type multi-layer cylindrical superconducting coil system which has a ratio of the maximum empirical magnetic field to the central magnetic field of not larger than 1.3 and is horizontally arranged such that the center axis of the coil is in the horizontal direction, a room-temperature shim coil system is arranged in said first room-temperature space to improve the homogeneity of the magnetic field, a second room-temperature space is formed penetrating through the cryostat and passing through the center of said split gap in the vertical direction, and a sample to be measured and an NMR probe having a solenoid-type probe coil are inserted in said second room-temperature space. Further, the NMR analyzer has a new function constituted by a system for irradiating and detecting the electromagnetic waves having wavelengths of shorter than 0.1 mm.